THE BUTTERFLIES OF THE NILGIRIS.

BY

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This list covers an area which extends from Mettupalaiyam in the South-East, from the Gudalur plateau in the North, and down to the Malabar boundary in the North-West. Otherwise it corresponds to the Nilgiri range and its slopes.

In compiling this list I have had little help from local collectors, but I am deeply indebted to Hampson's list of 1888. As most of his collecting was done in the Northern and North-Western Nilgiris and mine on the plateaux and the southern slopes, this has been of great value to me.

As a result of the great local variations in climate, rainfall and vegetation, it is impossible to give definite seasons for the appearance of particular butterflies to cover the whole area. Neither is it possible to allocate species to definite altitudes for the whole region, for these will naturally be found where their foodstuff grows and this is regulated by the climate. For instance, butterflies peculiar to the evergreen regions descend some 2,000 feet lower on the western slopes than on the southern because the evergreen forest does the same.

In the Southern Nilgiris and on the lower plateau February and March, and September and October, are the best seasons for butterflies. Butterfly life is always abundant at the foot of the south-eastern slopes, but April and May are comparatively poor months there. September to November is a good season for the northern and western slopes, but June to September and from December to February are poor. There is always good butterfly collecting to be had somewhere in the Nilgiris.

The following are the best localities for the collector. First of all comes Kallar. This must be one of the very best collecting areas in India. Butterflies are always abundant there and it seems to specialise in rarities. So far, I have caught 192 different species in the narrow strip about half a mile long around the ford and along the river at Kallar. I can especially recommend the ford over the Coonoor River where I have caught a large proportion of my best Nilgiri butterflies.

The Nadgani Ghat, from the top to just below the Nilgiri-Malabar boundary, ranks an easy second to Kallar. At its best it is probably better than Kallar, but the season there is short while Kallar is good throughout the year. There are probably plenty of spots on the western slopes as good as the Nadgani Ghat, but they are all difficult of access and I do not know them. The foot of the Nadgani Ghat is probably excellent, but it is outside the scope of this article and rather too remote in these days of petrol rationing.

It is worth noting that the butterflies of the Southern and Western Nilgiris are very different.

For evergreen forms on the southern side of the hills, Wenlock Bridge and the Runneymede area below Coonoor are good. For the forms peculiar to the plateaux anywhere on the edge of a shola will produce the few species to which this applies.

Gudalur, the Droog and the Burliyar neighbourhood are all worth a visit.

Note.—The identification letters and figures are from Evans' 'Identification of Indian Butterflies.'

In the text the 'lower plateau' refers to the Coonoor-Ketti plateau and the 'upper plateau' to the 'Downs'.

PAPILIONIDÆ.

1. (A1.1β) **Troides helena minos**, Cr.

From 1,350′ to 8,000′; not rare. On the Mettupalaiyam Ghat it appears from September to March and on the plateaux from February to May and from July to September. It is most easily caught early and late, feeding on lantana. It is common on the western slopes.

2. (A2·8β) **Tros jophon pandiyana**, M.

Quite common on the western slopes from 1,000′ to 3,000′. Not found elsewhere in the district.

3. (A2·9) **Tros hector**, L.

4. (A2·10β) **Tros aristolochiæ aristolochiæ**, F.

Both are abundant all the year round below the plateaux. Not rare on the lower plateau in the drier months.

5. (A3·5β) **Chilasa clytia clytia**, L.

Rather a scarce butterfly which is found up to about 4,000′. I have recorded it at Kallar in February, March and April and on the Nadgani Ghat in October.

6. v. *dissimilis*, L.

Distinctly rare. I have one specimen from Kallar in April.

7. (A4·1β) **Papilio polymnestor polymnestor**, Cr.

Common throughout the evergreen regions. Fairly common at Kallar and not rare on the lower plateau in the drier months.

8. (A4·10♂) **Papilio paris tamilana**, M.

Quite common on the western slopes but rare in the Southern Nilgiris. I have a specimen from Ketti taken on 27/9 and it may be caught sparingly on the upper Mettupalaiyam Ghat at the end of the S. W. rains. I have seen it at Avalanche in February.

9. (A4·13) **Papilio crino**, F.

Sometimes very common at Kallar where it appears throughout the year. It is also found, though less commonly, in the evergreen region and also on the lower plateau in February and March. I have not yet seen it on the western slopes.

10. ♂ v. *montanus*, Fd.

Appears with the typical male, but is rare.

11. (A4·14) **Papilio buddha**, Wd.

Western slopes only; not uncommon according to Hampson. I myself have not caught it though I have seen it in a local collection.

12. (A4·16) **Papilio dravidarum**, WM.

Hampson says that it is common on the western slopes and rare on the northern, but I have not yet seen it.

13. (A4·19β) **Papilio helenus daksha, M.**

Very abundant in the evergreen region and fairly common both above and below it.

14. (A4·25) **Papilio polytes romulus,** Cr.

The male is abundant everywhere. The typical female is scarce.

15. ♀ v. *stichius,* Hub.

This is the commonest female form, though it is never abundant.

16. ♀ v. *cyrus,* F.

Appears, but is very rare.

17. (A4·26♂) **Papilio demolion liomedon, M.**

Rare. Found only on the western slopes.

18. (A4·27♂) **Papilio demoleus demoleus,** L.

Abundant everywhere.

19. v. *orange.*

The form in which the yellow markings are replaced by orange is not rare at Kallar.

20. (A5·4♂) **Pathysa nomius nomius,** Esp.

At times extremely abundant at Kallar. Best caught settling on the damp mud of the ford.

On 19-2-'42 I caught a most remarkable aberration of this species. Of two of the bars on the upper forewing there is no trace and there are other minor differences on both the upper and under sides. This specimen was caught after a period of normal weather and I have seen no other similar specimens since. Hampson states that *nomius* is very rare, having caught but one specimen. As far as I know it is almost confined to the Kallar district in the Nilgiris. In Hampson's day Kallar must have been inaccessible, neither the railway nor the ghat road having been constructed.

Note.

(A5·β) **Pathysa antiphates naira, M.**

In Coorg this species is commoner than *nomius.* Consequently it seems reasonable to suppose that it may occur at low elevations on the western slopes of the Nilgiris.

21. (A6·2♂) **Zetides sarpedon teredon,** Fd.

22. (A6·3β) **Zetides doson eleius,** Fr.

23. (A6·8♂) **Zetides agamemnon menides,** Fruh.

Sarpedon is common from the plains to the tops of the highest hills, though only found on the plateau in the dry months.

Agamemnon is common throughout the year to about 4,500′.

Doson is less common and only found at low elevations. All can easily be caught settling on damp mud and flowers, especially lantana.

PIERIDÆ.

24. (B1·♂) **Leptosia nina nina,** F.

Always abundant at low elevations. Flies low in jungle and extends up to 6,800′.

25. (B4·10) **Pieris canidia canis,** Evans.

Common all the year round on the plateaux. *Canidia* is found on the Himalayas and on the hills of Southern India. Our race is typical of the law that Southern Indian races are smaller and darker than those from Northern India.

26. (B6·3) **Delias eucharis,** Drury.

Common throughout the year on the plains. The foodstuff of the larva is loranthus, consequently the female is frequently seen flying high among those trees upon which this parasite grows. It is found in small numbers on the Mettupalaiyam Ghat during most months of the year and on the lower plateau in February, May, August and September. Common on the western slopes.

27. (B8·β) **Belenois mesentina mesentina,** Cr.

Fairly common everywhere from July to December, and in March.

28. (B9·2♂) **Huphina nerissa evagete,** Cr.

Abundant all the year round on the Mettupalaiyam Ghat; not rare on the plateaux in the dry months. I have not seen it on the Nadgani Ghat though it may occur at low elevations.

29. (B9·3β) **Huphina nadina remba,** M.

Common on the western slopes. Hampson states that it is a rare straggler over the rest of the district.

30. (B10·3β) **Appias indra shiva,** Swin.

Rare; I have only two specimens, one from Wenlock Bridge in March and one from Ketti in May.

31. (B10·4♂) **Appias libythea libythea,** F.

Hampson states that it is rare. I have not seen it.

32. (B10·5β) **Appias lyncida latifasciata,** K.

'1,000′ to 3,000′,' Hampson. I have three specimens, all caught at the ford at Kallar, 9/7, 2/9 and 16/2. Reputed not to be rare on the Kotagiri Ghat.

33. (B10·6β) **Appias albina darada,** Fd.

Most abundant everywhere. ('Rare,' Evans).

34. ♀ v. *semiflava,* Fr.

Found together with the typical female but much less common.

35. (B11·1) **Catopsilia crocale,** Cr.

36. (B11·2) **Catopsilia pomona,** F.

37. ♀ v. *catilla,* Cr.

38. (B11·4) **Catopsilia pyranthe minna,** Herbst.

39. (B11·5) **Catopsilia florella gnoma,** F.

All except *catilla* are common everywhere except on the plateaux during the S.W. rains.

Pyranthe and *florella* are difficult to distinguish apart. In *pyranthe* the marginal band of the upper F.W. is continuous and narrowed posteriorly; in *florella* this band is macular and as broad at interspace 2 as at the apex. This difference is usually obvious in the females.

40. (B15·1) **Terias libythea,** F.

Abundant everywhere.

41. (B15·2♂) **Terias laeta laeta,** Bdv.

It took me a long time to come across this usually abundant insect. Eventually I found it in large numbers below Coonoor and at Gudalur in October.

42. (B15.4♂) **Terias blanda silhetana,** Wall.

The most abundant Terias at low elevations, It does not extend far into the hills,

43. (B15·5♂) **Terias hecabe simulata,** M.

Abundant at all seasons everywhere. A very hardy insect which I have caught at 11,500′ in the Himalayas. I have an albino specimen from Kallar.

44. (B15·7♂) **Terias andersoni ormistoni,** Watkins.

Rare. I have two specimens from Kallar, dated 20-6-'41 and 16-2-'43.

45. (B16·9♂) **Colias hyale nilgiriensis,** Fd.

Very common above 7,000′ but not caught below the plateaux. Appears throughout the year. Like *P. canidia canis, C. hyale nilgiriensis* is peculiar to the hills of Southern India with another race in the Himalayas. It is smaller and darker than the Himalayan form and only has the white female.

46. (B17·1) **Ixias marianne,** Cr.

Always very common at the foot of the hills and I have caught it twice at Ketti, 6,500′, though I have never seen it at intermediate altitudes. The female is very much less common than the male.

47. ♀ v. *white.*

48. ♀ v. *orange.*

Neither of these female forms is mentioned in Evans' "Identification of Indian Butterflies'.

In the white form the orange tip is absent and its place is taken by heavy black markings and confluent white spots. This is not rare at Kallar in August and July.

In the orange form pale orange takes the place of the white background. I have seen one specimen taken at Kallar in October.

49. (B17.2β) **Ixias pyrene frequens,** Butler.

Very common at the foot of the Mettupalaiyam Ghat and on the northern side of the hills. Unlike the northern race, satadra, frequens does not extend into the hills.

50. (B18·1♂) **Colotis amata modesta,** But.

51. (B18·4♂) **Colotis fausta fulvia,** Wall.

52. (B18·5β) **Colotis etrida etrida,** Bdv.

53. (B18·6) **Colotis eucharis,** F.

54. (B18·7♂) **Colotis danae danae,** F.

All are common in scrub country on the plains. Although Hampson mentions *eucharis* from the Nilgiris, I have not seen it, except for a single specimen in a local collection. No locality was given.

Etrida appears occasionally at Kallar and as a straggler up to 6,500′. I have recorded it in February and April.

I have caught *fausta* once at Kallar in April. Hampson says that it appears as a straggler on the plateaux.

I have recorded *amata modesta* on two occasions at Kallar; 19-2-42 and 9-7-43. On both dates it was fairly common.

I have taken *danae* once at Kallar, 7-5-42, but have no other record.

55. (B19·β) **Hebomoia glaucippe australis,** But.

Not rare on the plateaux in the dry months; always common at low elevations.

56. (B20·2♂) **Parenonia ceylanica ceylanica,** Fd.

Common throughout the year to about 3,500′ in the Southern Nilgiris. The female is considerably less common than the male. I have not yet noticed this species on the Nadgani Ghat. Hampson gives its distribution as from 1,000′ to 3,000′.

57. (B20·3) **Parenonia valeria hippia, F.**

I have not found this butterfly on the southern side of the hills. Hampson states that it appears from 1,000′ to 3,000′. It is probably an inhabitant of the foot of the northern slopes. Common round Bangalore.

Note.

(B7·2) **Prioneris sita,** Fd.

This butterfly is common in Coorg and should appear on the western slopes of the Nilgiris.

(B10·7β) **Appias paulina wardi, M.**

Hampson mentions this species but it is obvious that he refers to *albina,* which is omitted from his list. This is a rare butterfly but it should turn up somewhere in the district.

DANAIDÆ.

58. (C1·1β) **Hestia lynceus malabarica, M.**

Common on the western slopes to which Hampson says that it is confined. I have seen two specimens in a local collection which are said to have been caught on the Mettupalaiyam Ghat, but I doubt the accuracy of this statement.

59. (C2·1♂) **Danais aglea aglea,** Cr.

Common throughout the year. Not found above 5,000′.

60. (C2·7) **Danais nilgiriensis, M.**

Peculiar to the hills of Southern India. It is only found above 4,500′ and is common throughout the year.

61. (C2·9) **Danais limniace mutina,** Fruh.

Strangely enough this butterfly does not seem to be very common in the Nilgiris.

62. (C2·10β) **Danais melissa dravidarum,** Fruh.

Always most abundant on the slopes and at the foot of the hills. Often common on the plateaux.

63. (C2·12) **Danais plexippus,** L.

64. (C2·15) **Danais chrysippus,** L.

65. ♀ v. *alcippoides,* M.

66. ♀ v. *dorippus,* Cr.

Plexippus and *chysippus* are fairly common everywhere, especially at low elevations.

I assume that the two varieties of *chrysippus* appear as Hampson states that he had seen the varieties of *H. misippus* that mimic them.

67. (C3·7β) **Euploea core core,** Cr.

68. (C3·12β) **Euploea coreta coreta,** Godman.

Both are common on the plateaux during the dry months; common elsewhere throughout the year.

69. (C3·18β) **Euploea crassa kollari,** Fd.

Rare. I have caught two males of this species in May and October at Kallar. I have not had the female. This species has not previously been recorded from the Nilgiris as far as I know.

SATYRIDÆ.

70. (D2·3♂) **Mycalesis anaxias anaxias**, Hew.

Confined to evergreen forest. Common on the Mettupalaiyam Ghat where it is the prevalent Mycalesis throughout the year. It is also common on the western slopes.

71. (D2·9♂) **Mycalesis perseus typhlus**, Fruh.

72. (D2·10♂) **Mycalesis mineus polydecta**, Cr.

73. (D2·11) **Mycalesis igilia**, Fruh.

74. (D2·12♂) **Mycalesis visala visala**, M.

75. (D2·14) **Mycalesis subdita**, M.

76. (D2·16♂) **Mycalesis khasia orcha**, Evans.

These are confusing species to identify. The under forewing brands of the males are the most useful characteristics: it is often impossible to separate some of the females.

Perseus: both the brands are small and black and the under hindwing ocellus in 3 is out of line. Expanse: 43 to 52 mm's.

Hampson states that the Nilgiri W.S.F. has the ocellus on the forewing as large as that in *mineus*. This does not apply to those that I have caught on the Mettupalaiyam Ghat; in these the ocellus is absent, or, very occasionally, faint. The D.S.F. is very common at Kallar from January to April. The W.S.F. is not nearly as common and appears there in July and August. It is found up to about 4,500′ and is also common on the western slopes.

Mineus: the under forewing brand is small and brown. Expanse: 45 to 54 mm This butterfly is not common on the Mettupalaiyam Ghat and the only specimen in my collection is a female caught in December. It is common in Coorg and Hampson mentions it in his list . . . but this is of doubtful value as he does not mention any of the four following species. I feel, however, that it must be common enough somewhere in the Nilgiris.

Igilia: a long-branded species. The under forewing brand extends outside the discal band which is bent slightly outwards immediately above the brand. Otherwise the band is straight and sometimes distinctly broad. Usually there is no ocellus in 1 on the under forewing and the underneath is light in colour in the W.S.F. The termen is rounded and the apex pointed. Expanse: 44 to 45 mm. Common in the Gudalur forests in October.

Visala: a long-branded species which is easily recognised by the pointed apex and straight termen of the D.S.F. and the large ocellus of the W.S.F. Rare. One specimen from the Kallar jungles in May. Expanse: 45 to 55 mm.

Subdita: the under forewing brand is up to, but not beyond, the discal band. There is always an ocellus on the under forewing in 1 and the underside is very black in the W.S.F. The discal band is straight. Expanse: 47 to 56 mm's.

Quite common on the Mettupalaiyam Ghat at low elevations and can be caught during most months.

Khasia: the under forewing brand is similar to that of *subdita* but there is generally no ocellus in 1 and the underside is pale in the W.S.F. The discal band is curved slightly inwards round the large ocellus of the under forewing and the apex of the forewing is more pointed than in *subdita*. Expanse: 46 to 48 mm.

Unless a good series is obtained this species is difficult to separate from *subdita* in the D.S.F. In this, and in the four previously mentioned *Mycalesis*, all characteristics, except the brands, are liable to variation.

The females of *mineus*, *igilia*, *subdita* and *khasia* are very difficult to distinguish apart. *Subdita* always has an ocellus in 1 on the under forewing. *Igilia* and *khasia* are generally considerably smaller than the other two.

77. (D2·20) **Mycalesis adolphei**, Guer.

Confined to the hills of Southern India. This species is exclusively a high elevation butterfly and will not usually be found below 6,000′. In this part of the Nilgiris it seems to be confined to the edges of the jungles at the top of the Mettupalaiyam Ghat.

Hampson states that it has two broods; in May and in August. This statement must refer to another part of the Nilgiris as I have caught it near the

Droog in December and near Coonoor in October. It must be remembered that the climate of the Nilgiris varies considerably from place to place. Therefore it is impossible to make definite rules about the times of emergence of species to cover the whole district.

78. (D2·32β) **Mycalesis patnia junonia**, But.

Common up to about 6,500′. It is found all the year round in thick forest in the S. and W. Nilgiris but is apparently not found elsewhere in these hills. *Junonia* is very different from the Ceylon form, *patnia*. The pupil of the large ocellus on the forewing has only a supercilium of sullied white while that of *patnia* is completely encircled with tawny yellow. Our subspecies is of a darker brown and has no yellow streak in the cell. These differences are quite constant; are they not sufficient to give our race specific rank?

This is the commonest species of *Mycalesis* at Kallar and like others of the genus it seldom flies far out of thick jungle.

79. (D3·21♂) **Lethe europa ragalva**, Fruh.

'3,000′ to 5,000′; rather rare,' Hampson. 'Rare in Coorg,' Yates. Not at all rare among the bamboo at Kallar. It is extremely difficult to catch in good condition, as it settles among the stems and seldom allows a proper stroke of the net. Unlike *drypetis* it is never found away from bamboo.

80. (D3·22♂) **Lethe rohria nilgiriensis**, Guer.

In the Southern Nilgiris it is found above 4,500′ on the western slopes above about 2,500′. I have caught it from February to October. Fairly common.

81. (D3·23β) **Lethe drypetis todara**, M.

The male is common in bamboo jungle at Kallar between July and October but the female is very rare there. Both sexes are extremely common at Gudalur and on the Nadgani Ghat in October.

I have also caught it at Ketti, 6,500′, in August and December. As no bamboo grows near Ketti the larvae most probably feed on grasses at this altitude.

82. (D14·16) **Ypthima asterope mahratta**, M.

'Rare; northern slopes,' Hampson.

Rare in the Southern Nilgris. I have had the W.S.F. from Kallar on 31-7-'41 and 2-9-'42, and also from the Nadgani Ghat in October. The D.S.F. does not seem to appear in the Southern Nilgiris.

83. (D14·9) **Ypthima chenui**, Guer.

Peculiar to the hills of Southern India. Confined to open country on the plateaux where it is common from February to April.

84. (D14·10) **Ypthima ceylonica**, Hew.

Only appears on the southern slopes of the Nilgiris where it is very common.

85. (D14·11β) **Ypthima hubneri hubneri**, Kirby.

Very common up to about 5,600′. Found in the W.S., D.S., and a variety of intermediate forms.

86. (D14·13β) **Ypthima avanta striata**, Fd.

'Southern slopes, 2,000′ to 4,000′. W.S.F. in August,' Hampson.
'Rare; Nilgiris,' Evans.
I have not yet caught this species.

87. (D14·14♂) **Ypthima philomela tabella**, Mar. and de N.

Common on the N.W. corner of the Nilgiris and on the Wynaad boundary. I have one possible D.S.F. specimen from Ben Hope (Mettupalaiyam Ghat) taken in March. This specimen is very indistinctly marked and is difficult of identification.

88. (D14·15♂) **Ypthima baldus madrasa**, Evans.

Very common in a variety of forms.

89. (D15·1) **Zipoetis satis**, Hew.

Rare on the southern, but not rare on the western, slopes. Capt. P. Morrison Godfrey caught a specimen at mile 10/7 on the Mettupalaiyam Ghat Road 9-11-'41. I have caught a number on the Nadgani Ghat between 1,500′ and 3,000′ in October.

90. (D16·♂) **Orsotrioena medus mandata**, F.

Common at all seasons in forest at low elevations.

91. (D22·1) **Melanitis leda ismene**, Cr.

92. (D22·2β) **Melanitis phedima varaha**, M.

93. (D22·3♂) **Melanitis zitenius gokala**, M.

Apart from that of *leda* I have not found Evans' descriptions very helpful.

Leda ismene. As far as I know this is the only *Melanitis* to be found on the plateaux where it is fairly common. It is also quite common at Kallar and below Coonoor.

The W.S.F. is easily identified, the underside being grey, finely straited with brown and the ocelli well-defined and large. These characteristics immediately distinguish it from the other two species of *Melanitis*. The D.S.F. may easily be confused with *zitenius gokala*. Except that *gokala* is usually larger than *ismene*, it is difficult to distinguish between these two in the D.S.F.

Ismene is not exclusively a jungle butterfly, as the other two are. It will be found wherever there is shade. Expanse : 72 mm. (circa).

Phedima varaha. Not common and very difficult to catch, as, on the southern slopes, it lives in dense bamboo jungle.

So far I have only four specimens from which to draw my conclusions. (a) male, D.S.F., Kallar, 28/4 ; (b) male, W.S.F., Kallar, 15/7 ; (c) female, W.S.F. Kallar, 14/8; (d) male, W.S.F., Nadgani Ghat, 23/10. These were all caught at altitudes between 1,250′ and 2,000′.

The males are almost unmarked on the upperside, except for a somewhat blurred black spot in 3 and 4. The white spot is vestigial. Above both dry and wet forms of the males are very much alike, though the shape varies as it usually does in this genus. The ochreous costal area is faintly discernible. Specimen d. is much more caudate at v.3 than the other two are.

In the D.S.F. specimen the underside is plain and of a light brown colour. The underside of the W.S.F. males is brown to dark brown striated with light purple (very heavily in the Nadgani specimen). They also possess minute but well-defined ocelli. Evans states that the underside of the W.S.F. of this species is ferruginous with prominent discal lines. This applies to my female specimen but not to the males.

The female specimen is remarkable. As it was caught in August, the middle of the first wet season at Kallar, when other wet season forms were flying, it is presumably a W.S.F. Nevertheless the underside is not ocellated, there being merely the vestiges of white spots on a light ochreous background. The discal lines are well-defined.

Above, there is a well-defined black mark at the end of the cell and beyond. The costa is ferruginous-ashy broadening to a bright ferruginous patch beyond the black mark. This shades into an ill-defined ashy brown area that reaches the termen. There are no traces of black and white spots in 3 and 4 and the forewing.

Expanse : (*a*) Male, 80 mm. (*b*) male, 78 mm. (*c*) female, 82 mm. (*d*) male, 78 mm.

Zitenius gokalai. The dry and wet season forms are very similar. On the underside the discal lines are more prominent in the W.S.F. and the markings are richer. On the upperside the markings are bright and well-defined in the W.S.F., but slightly less so in the D.S.F. Both forms are very similar to *leda*, D.S.F., but *zitenius* is the larger.

This species is very common at the top of the Mettupalaiyam Ghat in March and December and at Kallar in December and early January.

Expanse : 72 mm. to 82 mm.

94. (D.) **Melanitis tristis,** Felder.

I have one or corresponding to de Niceville's description of *M. tristis* which I caught at Kallar on 31-7-'41 in deep bamboo jungle. According to him this is a variety of *M. aswa* (*phedima?*) and had been recorded from N. India and the Wynaad. To me it seems to bear no resemblance to this species which I have caught at the same season. I therefore tentatively give it as a distinct species. I append a description below.

Sex : male.

Expanse : 66 mm.

Upperside : deep glossy-brown with a bluish tinge.

F.W. termen straight with an ashy border, narrow at the tornus, widened towards the apex and about 4 mm's. wide at the middle. Costa well curved.

H.W. termen with a narrow ashy border, violent tinged at the tornus. A small ocellus at 2 (the only markings on the upperside).

Underside : background brown, richly straited with violet.

F.W. discal band straight, beginning about 12 mm's. down the costa from the apex and pointing to the tornus. The apical area, outside the discal band, is of a lighter violet, containing 2 small ocelli; there is a third small acellus in 4. H.W. very small ocelli in 1c, 2, 3, 4, 5 and 6. Discal band curved parallel with the termen and well-defined.

95. (D25·1) **Elymnias hypermnestra caudata,** But.

Will only be found at low elevations where palm trees grow. Common at Kallar in September : also found in May, July, October and December, but is rather scarce then. Caught on the western slopes as well. At Kallar it frequents the edges of the areca plantations, especially on the Coonoor river side.

AMATHUSIIDÆ.

96. (E10·3β) **Discophora lepida lepida,** M.

A rare inhabitant of very thick bamboo jungle; the male only flies in the early morning, evening, and possibly at night, but the female can be seen flying in jungle during the daytime. Both may be flushed in the daytime by penetrating their haunts : they are then easily caught as they do not fly far without settling.

The male can best be taken by sugaring in the early morning. Ormiston states that it may be caught in the same manner as soon as it is dusk. I have only once tried sugaring for it and this was met with instant success. It was at 8-30 a.m. at Kallar, though possibly an hour earlier at that season (Aug.) would be better. My bait was a mixture of toddy, jaggery and beer. In the process of mixing I had collected an attractive odour myself and a male immediately settled on my stocking.

The male has a peculiar odour, to my mind best described as a mixture of tom-cat and jasmine !

I have in my collection two males from Kallar taken on 22-8-'41 : I also noticed a female flying at the same place on 31-7-'41.

Mr. Smith of Aruvankadu has in his possession a very fine female of over 100 mm. expanse. This was caught *in the cordite factory* at Aruvankadu at about 6,200'. This seems to me to be a most remarkable record in every way. The foodstuff is bamboo, but there is none of this growing within a number of miles and at a very much lower altitude.

This species has not previously been recorded from the Nilgiris.

Note.—(E7. ♂) *Amathusia phidippusfriderici,* Fruh.

This is listed as a South Indian species but I have no information of the locality in which it has been caught.

NYMPHALIDÆ.

97. (F1·2β) **Charaxes polyxena imna,** But.

Rare. Five records from Kallar, 1,350'. I have one male which was caught settling on dung, 23/11, and one female caught on 22/8. The other three are in a local collection.

98. (F2·7β) **Charaxes fabius fabius,** F.

Very rare; generally found near water. I have seen one specimen at Kallar, 2-10-'41.

99. (F2·2β) **Eriboea athamas agrarius,** Swin.

Not rare on the ghats up to 4,500′. Settles readily on damp mud. Observed during most months of the year.

100. (F7·8β) **Apatura parisatis atacinus,** Fruh.

Only found in the evergreen country. It is quite common on the upper Mettupalaiyam Ghat between 4,500′ and 6,500′. Recorded in most months.
'Female, very rare; male, not common,' Hampson.

101. (F10·1♂) **Euripus consimilis meridionalis,** WM.

'One at lantana, N.W. corner of the Nilgiris, October, 1888,' Hampson.
One specimen caught at Kallar is the only other record of which I know. Extremely rare in the Nilgiris. Rare in Coorg.

102. (F18·3♂) **Euthalia lepidea miyana,** Fruh.

Very rare on the southern slopes. One record from Kallar on lantana, 23-11-'41. Three from the Nadgani Ghat at 2,000′ on 23-11-42 where it seems to be much less rare. As far as I know this species has not previously been recorded from the Nilgiris.

103. (F18·14β) **Euthalia garuda meridionalis,** Fruh.

Very rare; one record from the Mettupalaiyam Ghat, season and altitude unknown.

104. (F18·17β) **Euthalia lubentina arasada,** Fruh.

Rare. Appears occasionally at Kallar. Observed in May, October and August of '41 up to 2,500′. Not previously recorded from the Nilgiris.

105. (F18·27β) **Euthalia evalina laudibilis,** Swin.

Scarce, but the commonest of the genus in the Nilgiris. It may be caught at Kallar during most of the year. Observed on the western slopes in October.

106. (F18·28) **Euthalia nais,** Forst.

Rare. Observed at Kallar in March, May, July and October. It has the habit of frequently settling on the ground and never flies far if disturbed.
'Bamboo jungle,' Hampson.
All these five species of *Euthalia* are scarce throughout the Nilgiris and Hampson had only observed *nais*. *Evalina* and *garuda* seem to be common around Bangalore.

107. (F20·β) **Parthenos sylvia virens,** M.

'Common on the western slopes; a rare straggler over the rest of the district' Hampson. One seen flying high at Kallar, 23-11, is my only record from the Southern Nilgiris. It is common on the Nadgani Ghat from October to February.

108. (F24·7β) **Limenitis procris undifragus,** Fruh.

'3,000′ to 4,000′; rare,' Hampson.
I have not yet seen this species; probably confined to the evergreen area.

109. (F25·2♂) **Pantoporia nefte inara,** Db.

'3,000′ to 4,000′; rare,' Hampson.
Confined to the evergreen area. Not rare on the Nadgani Ghat in October and February. I have also seen a specimen reputed to have been caught on the Mettupalaiyam Ghat. I have never seen one in the Southern Nilgiris myself.

110. (25·4♂) **Pantoporia selenophora kanara,** Evans.

'3,000′ to 5,000′; very rare,' Hampson.
Confined to the evergreen area. It may be taken in small numbers just above Wenlock Bridge on the Coonoor River during March I have seen it nowhere else.

111. (F25·10♂) **Pantoporia ranga karwara**, Fruh.

'3,000′ to 4,000′; rare,' Hampson.
Confined to the evergreen area. It may be found in the two nalas at the eastern end of the estate above Runneymede railway station. It may be caught there at the end of February and in early March. I have also seen it in the evergreen area of the Nadgani Ghat in February.

112. (F25·14) **Pantoporia perius**, L.

Rare. Occasional stragglers find their way up as high as Ketti, 6,500′. I have seen it at Kallar in November and at Ketti in May.

113. (F26·1♂) **Neptis columella nilgirica**, M.

'3,000′ to 5,000′; not rare,' Hampson.
I have little information about this species except that it is rare in this part of the Nilgiris. I have two specimens: one from Ketti, 6,600′, taken in March and one from the Mettupalaiyam Ghat at 2,500′, caught in October, W.S.F. The markings of the W.S.F. are considerably darker.

114. (F26·2β) **Neptis jumbah jumbah**, M.

Always common to about 4,500′. Also found on the lower plateau in March and April but is not common then.

115. (F26·6♂) **Neptis hylas varmona**, M.

Always common on the ghats; common on the plateaux in the dry months.

116. (F26·7♂) **Neptis soma kallaura**, M.

Rare; one specimen from the Nadgani Ghat in October.

117. (F26·8♂) **Neptis nandina hampsoni**, M.

Hampson doubted whether this species was different from *soma*. It is, however, so different in appearance that it is difficult to understand why he held this view. This butterfly may be taken, in the Southern Nilgiris, in exactly the same place, and at the same season, as *P. ranga karwara*. Similarly, this is the only spot in the Southern Nilgiris where I have seen the species. It may also be taken on the Nadgani Ghat in October, December and February, where it does not seem to be particularly rare.

118. (F26·15♂) **Neptis viraja kanara**, Evans.

Very rare in the Southern Nilgiris where I have had only one, from Kallar, 2-9-'42. Hampson had only recorded one and this was from the western slopes. I have also seen a specimen on the Nadgani Ghat, 23-10-'42.

119. (F26·32β) **Neptis hordonia hordonia**, Stoll.

Common all the year round at low elevations. Stragglers find their way up to about 7,000′ in March and October. Hampson says that the D.S.F., *plagiosa*, is caught on the plateau throughout the year.

120. (F27·4♂) **Cyrestis thyodamas indica**, Evans.

A fairly common inhabitant of the evergreen region, where it seems to occur throughout the year in suitable weather. I have also seen stragglers at Ketti, 6,500′, in May and February. Only the white form occurs in S. India.

121. (F30·1) **Hypolimnas misippus**, L.

Common everywhere during the dry months.
According to Hampson the female forms mimicking *dorippus*, *chrysippus* and *alcippus* appear.

122. ♀ v. *alcippoides*, But.

Very rare.

123. ♀ v. *inaria*, Cr.

Very rare. I have seen one in a local collection.

124. (F30·2) **Hypolimnas bolina**, L.

Not usually common but well distributed from the plains up to 7,000′. Common at Kallar in 1942 in March and April, and below Coonoor in October.

125. (F34·1♂) **Kallima philarchus horsfieldii**, Koll.

'Rare on the northern; not uncommon on the southern slopes,' Hampson. I have found it rare, having but two records myself, 4/7 and 7/12 at Kallar. I have also seen specimens from the same neighbourhood in a local collection. Over-ripe jack fruit is supposed to attract this species.

126. (F35·1♂) **Precis hierta hierta**, F.

127. (F35·2♂) **Precis orithyia swinhœi**, But.

128. (F35·3♂) **Precis lemonias vaisya**, Fruh.

129. (F35·6♂) **Precis iphita pluviatalis**, Fruh.

All are abundant throughout the year on the slopes and common on the plateaux except between June and September.

130. (F35·4♂) **Precis almana almana**, L.

Not as common as the previous members of this genus but it may be caught fairly regularly at Kallar between March and June, and in November and December. Up to 7,000′ in March, April and May.

131. (F35·5) **Precis atlites**, L.

Not rare at Kallar from January to March. Rare as a straggler up to 7,000′ in March.

132. (F36·1) **Vanessa cardui**, L.

133. (F36·3β) **Vanessa indica pholœ**, Herbst.

134. (F36·4β) **Vanessa canace viridis**, Evans.

Cardui is caught at all altitudes, being very common on the plateaux, but the other two will only be taken at the top of, and above, the evergreen area. All are common and will be caught throughout the year.

135. (F39·1γ) **Argynnis hyperbius hybrida**, Evans.

Common all the year round on the plateaux. Never found below them.

136. (F41·β) **Cupha erymanthis maja**, Fruh.

Mainly confined to the evergreen region, though I have come across it both above and below. Rare at Kallar but quite common at Ketti in March. Abundant at Wenlock Bridge and common on the Nadgani Ghat where it will be found throughout the year.

137. (F42·1) **Atella phalanta**, Drury.

Fairly common everywhere throughout the year.

138. (F44·β) **Cynthia erota saloma**, Swin.

Not rare in the evergreen region but very difficult to obtain in good condition. A rare straggler at Ketti. In the Southern Nilgiris its season is from May to December.

139. (F45·4β) **Cirrochroa thais thais**, F.

Abundant in the evergreen region: not rare at the foot of the hills and up to 7,500′.

140. (F47·2β) **Cethosia nietneri mahratta,** Fd.

Common in the evergreen area of the western slopes where I have caught it from October to December. Hampson states that it is a rare straggler in the rest of the Nilgiris.

141. (F48) **Byblia ilithyia,** Drury.

A common plains butterfly in the country beyond Mettupalaiyum, but rare in the Nilgiris. I have only recorded it once. This was at Ketti, 6,500′, 24-9-'42.

142. (F49·1β) **Ergolis ariadne indica,** M.

Common at Kallar from July to December. Also caught up to 6,500′.

143. (F49·2β) **Ergolis merione merione,** Cr.

Common at Kallar from July to December: very common on the Nadgani Ghat in October and not rare on the lower plateau in the dry months.

144. (F52) **Telchinia violæ,** Fab.

Common throughout the year on the ghats: fairly common on the lower plateau between March and May.

Note.

(F2·1α) **Eribœa schreiberi wardi,** M.

A very rare butterfly caught both in Coorg and Kanara. It is reasonable to expect that it appears on the western slopes.

(F18·10) **Euthalia telchinia,** Men.

Has been caught once in Coorg. Very rare indeed and unlikely to be taken in the Nilgiris.

(F33·β) **Doleschallia bisaltide malabarica,** Fruh.

Appears in Kanara and Coorg. Very rare but probably appears in thick jungle on the western slopes of the Nilgiris.

(F42·2β) **Atella alcippe mercea,** Evans.

A very local butterfly that appears in Coorg and Kanara. May possibly be found in the Nilgiris.

ERYCINIDÆ.

145. (G1·3♂) **Libythea lepita lepitoides,** M.

Common at times up to 3,500′. It often settles in very great numbers on damp sand at Kallar. I have also seen it on the Nadgani Ghat. Found during most months of the year.
'Rare,' Hampson.

146. (G1·4β) **Libythea myrrha carma,** Fruh.

Found in, and above, the evergreen region. I have also one specimen from Kallar, but its appearance there is most unusual.
It comes to water like lepita but is not usually common except in October below Coonoor. Also observed from February to June.

147. (G4·5♂) **Abisara echerius prunosa,** M.

Common in evergreen forest. I have observed it in February and March, and from August to December.

(*To be continued.*)